



MEMORANDUM

To: Bicycle and Pedestrian Task Force

Date: March 17, 2010

From: John O’Neal, CMAP Staff

Re: Adopted Revisions to the MUTCD – Bike-Ped

The following summarizes the major changes adopted in the new edition of the Manual on Uniform Traffic Control Devices (MUTCD), which affect bicycle and pedestrian travel. We owe much of its content to Bruce Friedman, P.E., PTOE and Scott Wainwright’s presentations in the recent ITE webinar entitled, “2009 MUTCD: Pedestrians and Bicyclists.”

Background:

- Final Rule issued December 16, 2009
- In effect at Federal level January 15, 2010
- States have 2 years to adopt (by January 2012)

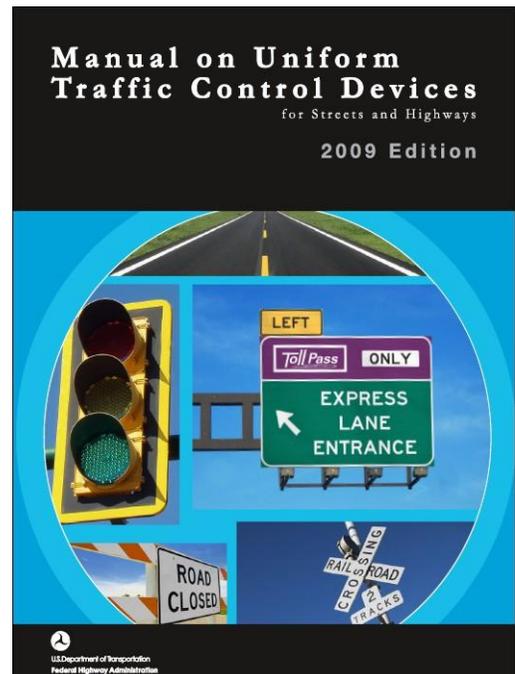
Implementation rule:

New MUTCD: Only new devices must be compliant

- Agencies are required to update devices as they wear out
- Older devices can remain for "remaining service life" unless there's a defined compliance date

(Old MUTCD: All devices must be compliant

- Agencies were required to update devices, both new and existing)



Bicycle Elements

- New Sign – Bicycles May Use Full Lane:

- Optional for use in "narrow" lanes
- Can be used independently, or with Striped Lane Marking (SLM)
- Supported by many states' laws

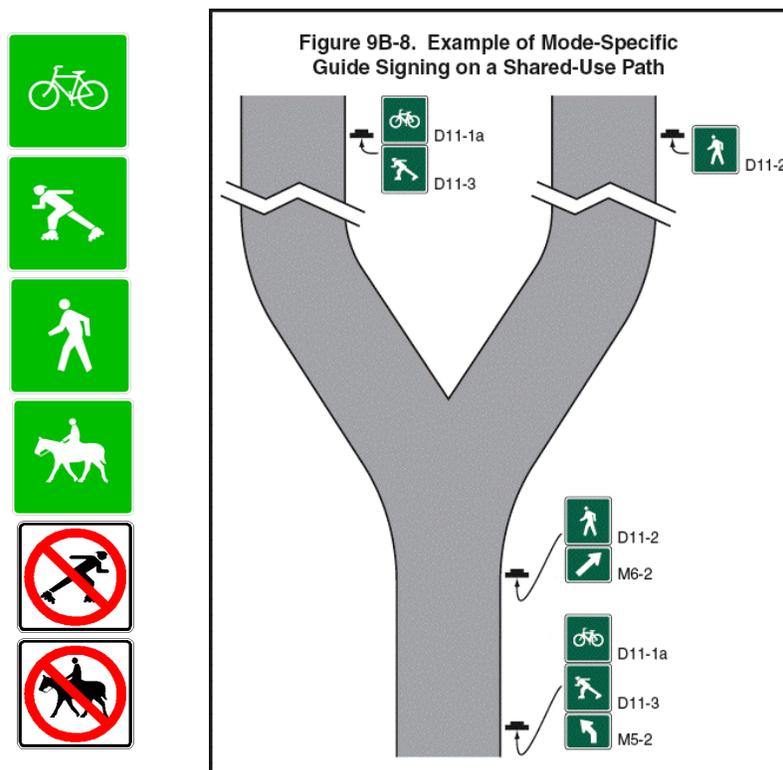


- Bike Lane signs no longer mandatory:

- BIKE LANE signs are recommended, but no longer mandatory
- Signs are still the same



- New Signs – Path user signs:



- New Sign – Combination Bike/Ped Sign:

- Optional for use at path crossings
- Shows 2 types of primary path users
- Cannot "fix" problems at sidepath intersections



- New Signs – Bicycle Guide Signs:

- Provide detailed routing / destination / distance information
- Greatly improved over old "BIKE ROUTE" signs
- Provides a place for a pictograph (trail/route branding)



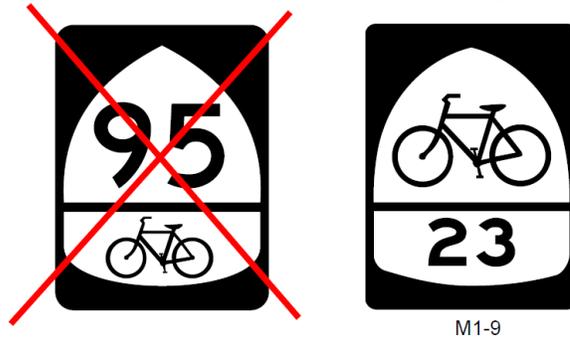
- New pavement marking – Shared Lane Marking:

- Intended to show correct cyclist location where bike lanes shouldn't or can't be installed
- Can be used in locations with and without on-street parking



- Revised design of the U.S. Bicycle Route Sign:

**Revised design of the
U.S. Bicycle Route sign**



- New pushbutton signs with bicycle image:



R10-24



R10-25

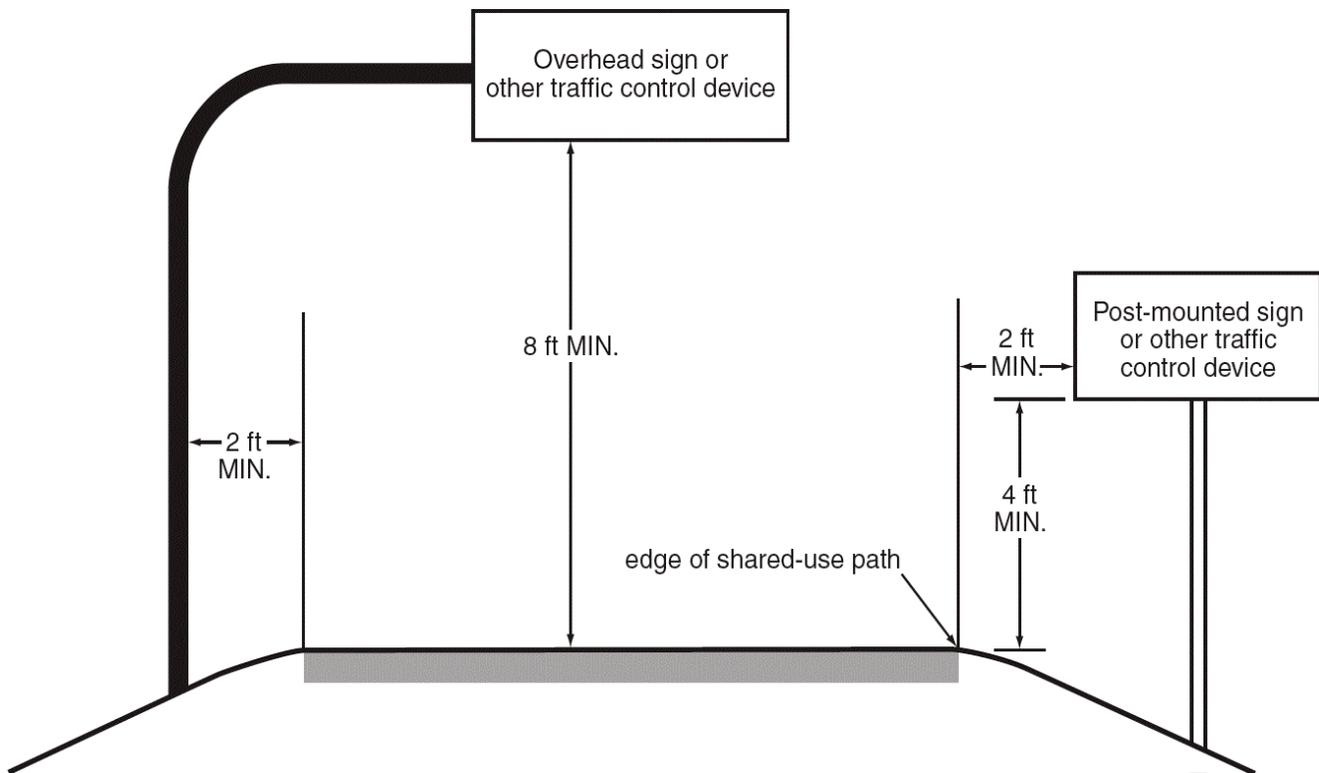


R10-26

- New offset and mounting height requirements on paths

- Deleted maximum mounting height & maximum offset
- Increases flexibility for practitioners without compromising safety
- Conforms with sign mounting on other facility types

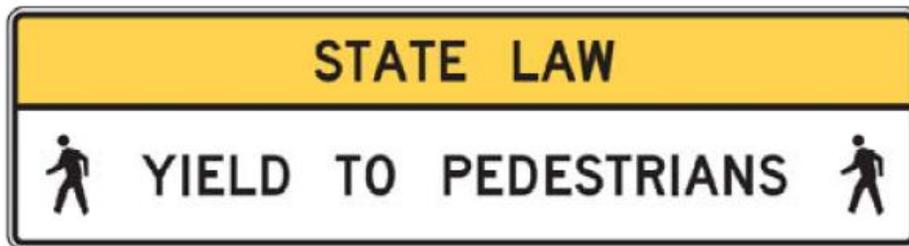
Figure 9B-1. Sign Placement on Shared-Use Paths



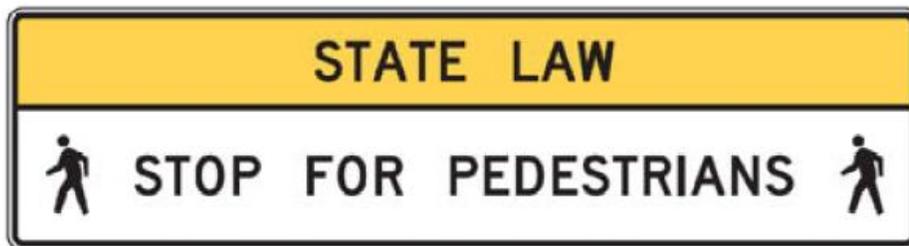
Pedestrian Elements

Part 2 - Signs

- Variant of “Yield Here To Pedestrians” and “Overhead Pedestrian Crossing” signs for States with laws requiring full stop:



R1-9



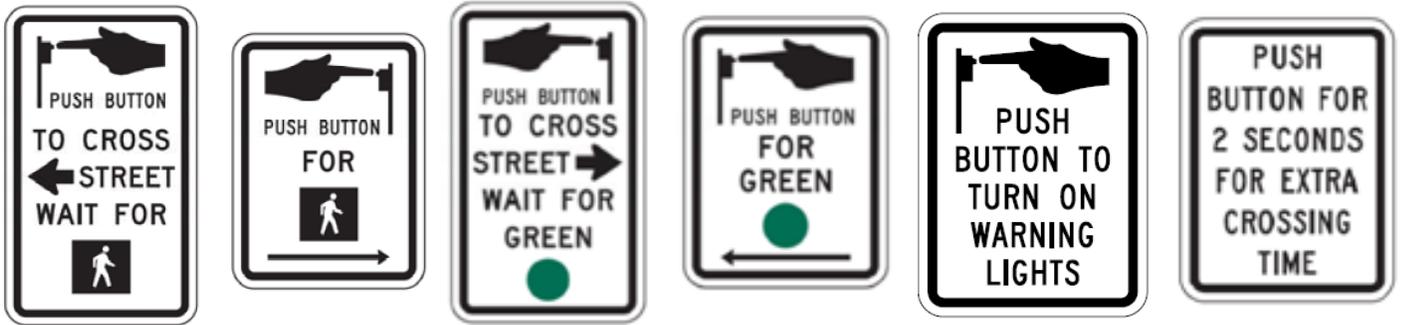
R1-9a

- New guidance on in-street pedestrian crossing signs:

- Background may be fluorescent yellow or fluorescent yellow-green
- New guidance on placement locations
- Sign supports must be designed to bend over and bounce back when struck



- Symbol added to pedestrian pushbutton signs and new special-purpose pushbutton signs:



- New symbolic design for R10-15 sign:



R10-15

- New fluorescent yellow-green sign color:

- Required for school and school bus signs
- Optional for pedestrian, bike, and playground signs

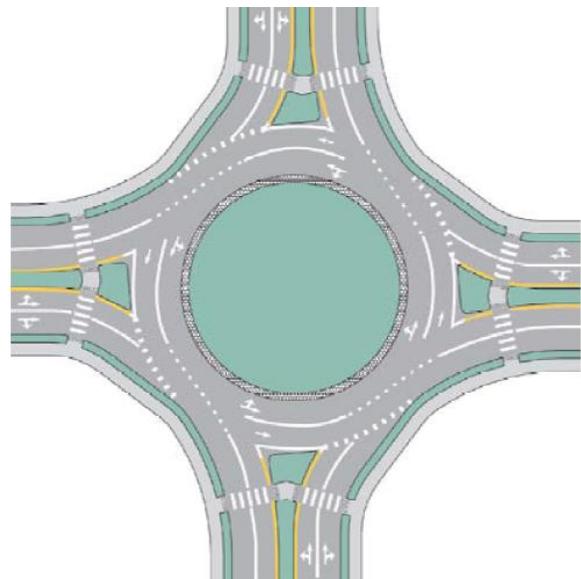


Part 3 – Markings

- Revised guidance for provision of marked crosswalks:

- New marked crosswalks alone, without other substantial measures to reduce speeds, shorten crossing distance, enhance driver awareness of crossing, and/or provide active warning of ped presence should not be installed across uncontrolled roadways with:
 - > 4 travel lanes, and
 - Speed limit > 40 mph, and
 - ADT > 12,000 without raised median or ped refuge, or > 15,000 with raised median or ped refuge

- New Chapter 3C – Pavement markings at roundabouts:



- Section 3G.01 – Guidance on colored pavements:

- If crosswalk pavement uses a retro-reflective coating, or is intended to communicate a regulatory, warning, or guidance message (i.e. is a Traffic Control Device), then the crosswalk shall comply with color code and other provisions for all markings.

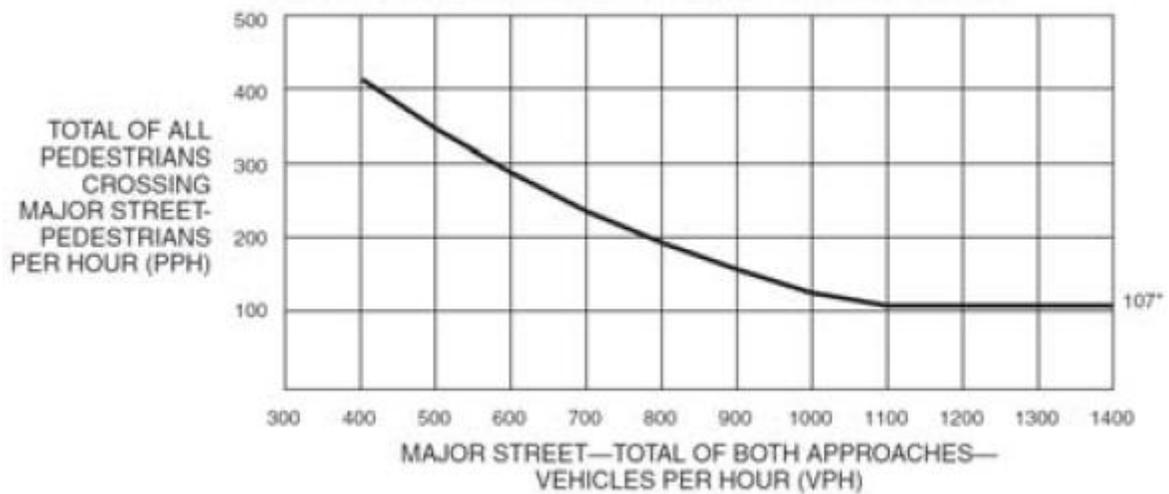


- Signal warrants – revisions to Warrant 4 (pedestrian volume, Section 4C.05):

- Uses method more comparable to vehicular volume warrants
- Signals based on Warrants 4 or 5 (pedestrian volume and school crossing, respectively) should also control the minor street of driveway (i.e. no 'half signals')



Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



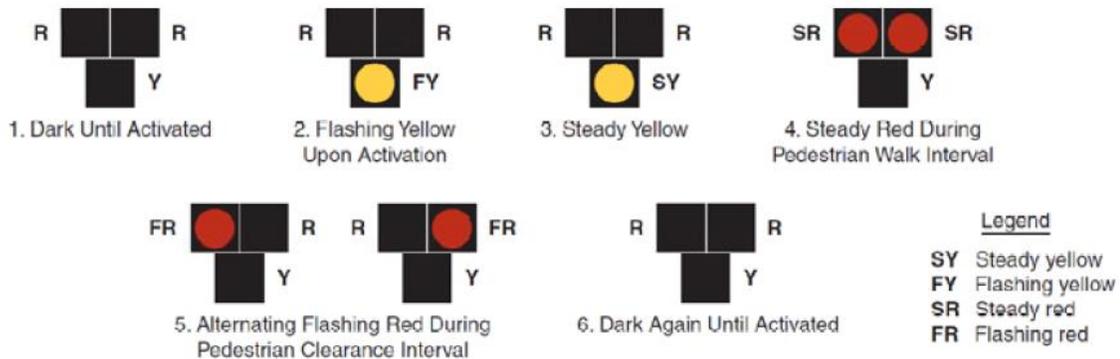
*Note: 107 pph applies as the lower threshold volume.

Part 4 – Signals

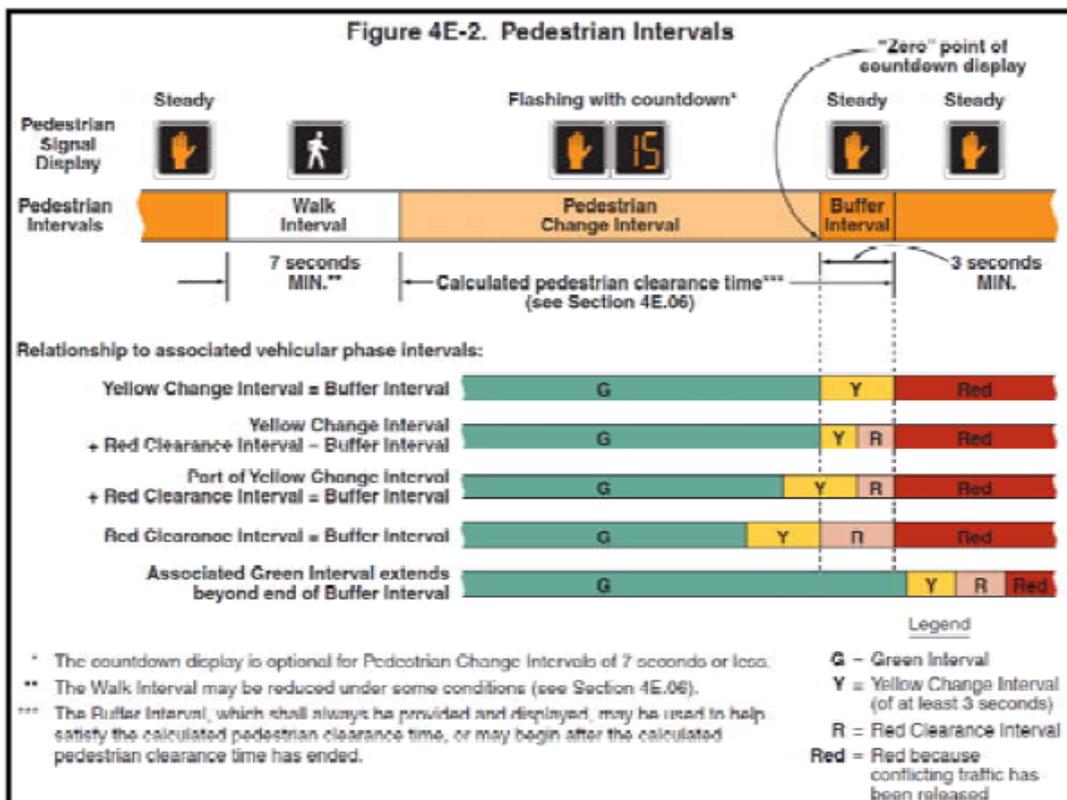
- New Chapter 4F – Pedestrian Hybrid Beacon:

- Should not be installed at or within 100 feet of an intersection

Figure 4F-3. Sequence for a Pedestrian Hybrid Beacon

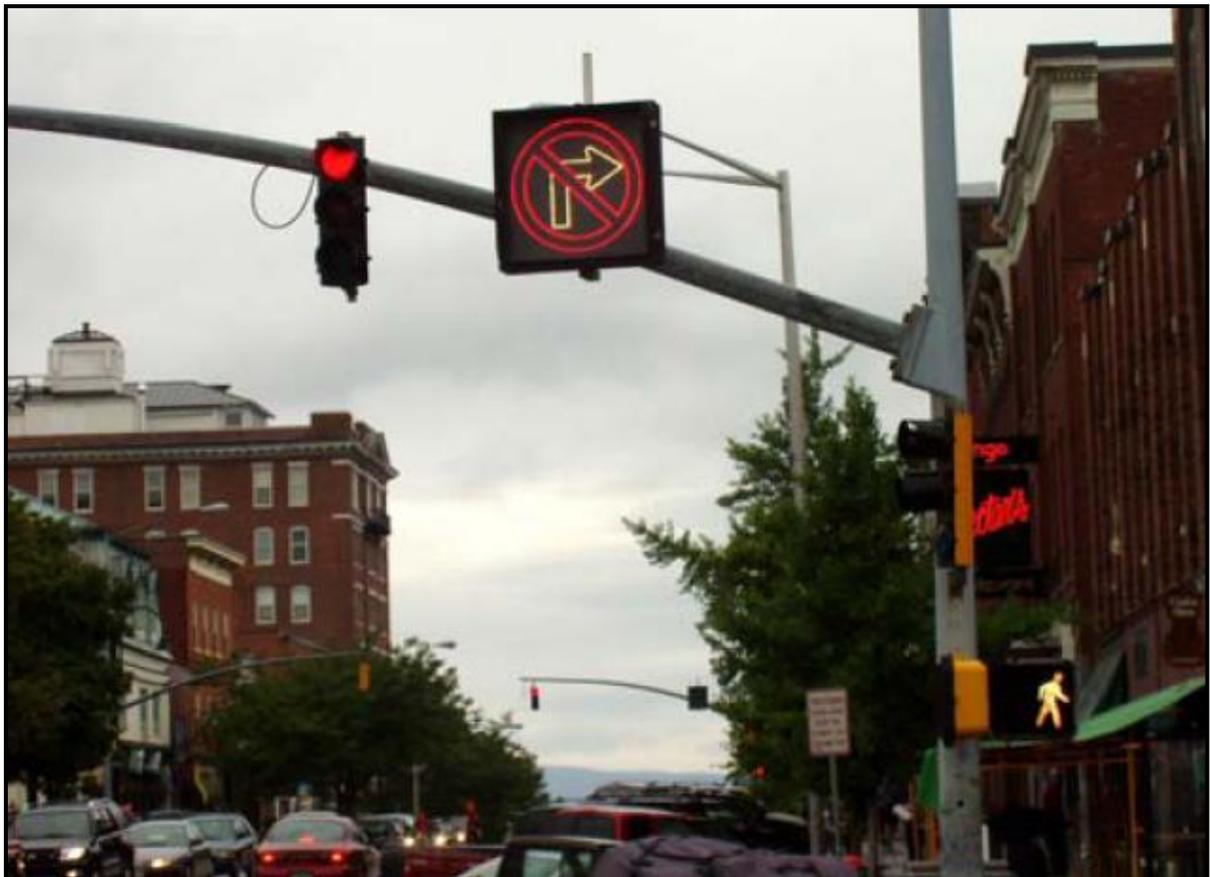


- New recommended walking speed for calculating the pedestrian clearance time (reduced from 4 feet-per-second to 3.5 feet-per-second, with some exceptions – see below):



- Sum of Walk time + Ped. Clearance Time is based on 3.0 feet per second for distance from ped detector to far side
- Exception: allows 4.0 ft/sec if extended button press or passive ped detection allows slower peds to request additional crossing time
- On roads with a pedestrian refuge median island, if signal timing provides only enough time for pedestrians to cross to the median, then ped signals, pushbuttons (if actuated), and signs are required in the median
- If a 'walking person' or a 'flashing upraised hand' is displayed, then a steady red or flashing red must be displayed to any conflicting vehicular conflicting vehicular movement that is perpendicular or nearly perpendicular to the crosswalk.
- Ped change interval (FDW) shall end at least 3 seconds ("buffer") before release of conflicting traffic
 - Buffer shall not begin later than the start of the red clearance interval, if used
 - Compliance date:12/31/2014 or when timing adjustments are made (whichever occurs first)

- Optional Leading Pedestrian Interval (LPI):



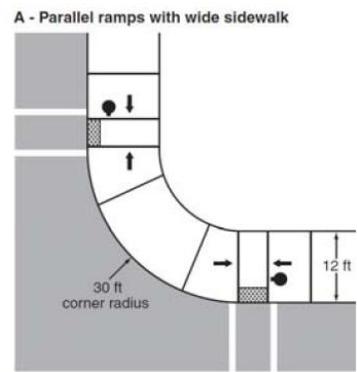
- Countdown pedestrian signals:

- **Required** for all ped signals where ped change interval is more than 7 seconds
- No specific compliance date for retrofitting existing ped signals (can remain w/o countdown until ped heads are replaced)
- May be used even if ped change interval is 7 seconds or less



- New requirements for pedestrian pushbuttons:

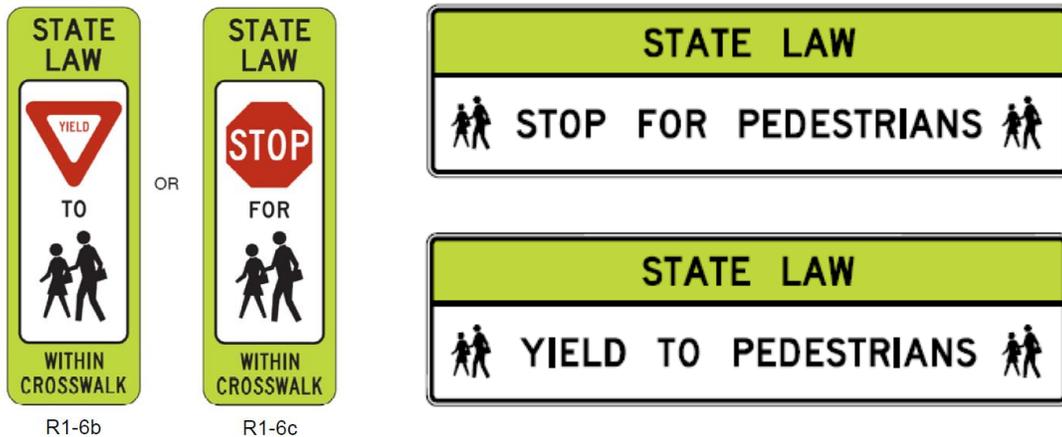
- Positioning of pedestrian pushbuttons and legends on pushbutton signs shall clearly indicate which crosswalk signal is activated by which pushbutton s
- New diagrams show required position of pushbuttons
- New guidance on Accessible Pedestrian Signals (APS) in Sections 4E.09-4E.13
 - APS shall provide the 'Walk Indication' in both audible and vibrotactile forms.



Part 7 – Schools

- New signs with the schoolchildren symbol:

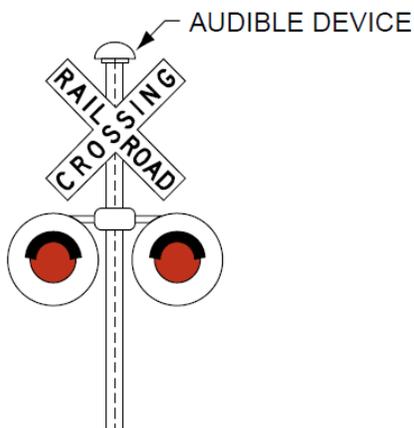
- Schoolchildren symbol may be used on in-street stop and yield signs at school crossings, and in overhead pedestrian crossing signs at unsignalized school crossings.



- New school crossing guard operating procedure requirements

- Shall not direct traffic in the usual law enforcement regulatory sense
- Shall pick opportune times to create a sufficient gap in traffic flow
- Shall stand in roadway
- Shall use a STOP paddle
- Adult school crossing guards and law enforcement personnel performing school crossing supervision must wear Class 2 high-visibility apparel (compliance date is 12/31/2011)
- Provisions in former Chapter 7E regarding school-age crossing guards were deleted

Part 8 – Railroads and Light Rail



- Audible devices are required at active LRT grade crossings used by pedestrians
- New Chapter 8D on pathway grade crossings